

The Standard List

18 In accordance with Condition 16B.8, BT must publish and update the full list of Standard Services (the "Standard List") including competitive services. The Director General must consult BT and other interested parties (as set out in Condition 16B.7) before consenting to any exception to the requirement to publish. On 15 April 1996, BT submitted to OFTEL a copy of the Standard List under Condition 16B.8(b) and the List must be made available as provided in Condition 16B.8(c) and (d). BT was reminded on 30 August 1996 of its obligation to keep the list updated.

19 The Standard List must identify:

- (a) the charges to be paid by an Operator for each Standard Service, whether determined by the Director General or not;
- (b) the actual charges to be paid by an Operator where they are lower than the determined charges or where the charges have not been determined;
- (c) the cost attributable to each network component and part used in providing each Standard Service together with the unit cost charged by way of transfer charge within BT for each component and part used; and
- (d) each Standard Service the market for which is determined by the Director General to be competitive.

Methodology

20 Condition 13.5A.3A provides for call conveyance charges in this determination to be calculated on the basis of a forecast based on:

- (a) BT's audited Financial Statements for the financial year ending 31 March 1995;
- (b) BT's audited Interim Financial Statements for the period 1 April to 30 September 1995; and
- (c) any other relevant information available.*

21 This is the first determination of Standard Services in which the charges have been based on BT's Financial Statements. The Financial Statements are based on a separation of BT accounts into Retail, Network and Access whereas the previous regulatory accounts (the Financial Results By Service, the FRBS,) were based on services which included both network and retail costs. The inland call base in the FRBS covered only local, national and interconnect local and national. In the Financial Statements, the inland call base also includes the inland portion of the following types of call: international, payphone, Directory Enquiry, calls to and from mobiles and others such as Callstream. This has the effect of reducing the costs of basic conveyance as the network costs are spread over a greater base.

22 In this determination, conveyance costs are forecast to be 30% lower in 1996/97 than in 1994/95. Switch and transmission costs fell by around 20% from 1994/95 to 1995/96 as a result of the further reduction in local analogue exchanges and an increase in private circuits which reduced the share of

*The 1995/96 (full year) Financial Statements were published on 31 July 1996 and information contained therein has been used in this determination of Interim Charges in accordance with Condition 13.5A.3B(d).

transmission costs being allocated to PSTN. Reductions in the numbers of local exchanges, a slowdown in the increase in private circuits and a lower rise in traffic in 1996/97 (5% against 7% in 1995/96) suggest that a further overall reduction of 12% in conveyance costs from 1995/96 to 1996/97 might reasonably be anticipated. Taking into account the reduction from 1994/95 to 1995/96, this results in an overall reduction of 30% since 1994/95. The calculation of the forecast costs for 1996/97 is shown in Annex 2, Table 2.

23 Non-conveyance service costs are based on the 1995/96 Financial Statements which used a top-down cost allocation methodology whereas the 1995/96 Interim Charges determination was based on 1993/94 FRBS and used a bottom-up approach. This has resulted in some higher charges for some services and some lower for others. OFTEL is still examining the reasons for the differences. Any appropriate adjustment resulting from this examination will be reflected in the Final Charges determination.

Relevant Costs – Conveyance Standard Services

24 The component costs of conveyance have been established and Tables 1 and 2 at Annex Two show the calculation of charges by applying usage factors or 'routing factors' (see paragraph 37).

25 In accordance with Condition 13.5A.3 of the BT Licence, call charges have been set to cover BT's fully allocated costs of conveyance and include a full contribution to relevant overheads. The charges also cover a rate of return, decided by the Director General, applied to the relevant capital employed (see paragraph 46)

26 In deciding which of BT's overheads and capital employed are relevant, the Director General has followed the approach he took in the determination of Interim Charges for BT's Initial Standard Services for the year ending 31 March 1996. OFTEL is, however, still considering the treatment of redundancy costs and cash and short-term investments. A final decision on the treatment of these costs will be taken for the purposes of the Final Charges determinations for the years ending 31 March 1996 and 1997.

27 In this determination, in line with his decisions in the 1995/96 Interim Charges determination, the Director General has excluded redundancy costs of £30.7 million (out of a total for Network business of £90 million) which are the additional amounts over the previously established contractual requirement paid to employees for redundancy and the cost of pension provision under BT's annual schemes for voluntary redundancy. The Director General decided that these costs are not relevant to conveyance services. The Director General has also excluded £24.5 million (out of a total of £71.8 million of deferred redundancy debtors costs) from capital employed. (Deferred redundancy debtors represent the redundancy costs not allocated in the 1994/95 Financial Statements but deferred for allocation into later years.)

28 The Director General has also, in line with his decisions in the 1995/96 Interim Charges determination, excluded £321.3 million of net short term investments (that is, short term investments less short term loans plus cash in the bank and in hand) from capital employed and £23.9 million of net short term interest from inland conveyance operating costs.

29 The exclusion of costs from operating costs and capital employed has an effect on other costs, particularly corporate costs, which are allocated in proportion to all costs. The effect on these other costs is a 'ripple effect' which produces further reductions. Combined with the 'ripple effect' and an adjustment to 'notional' debtors which is a fixed proportion of the final charge, the total exclusions amount to £60.1 million.

30 The exclusions (redundancy and net short-term investments) made by the Director General in relation to inland conveyance costs reduce conveyance charges by about 3%. They can be summarised as follows:

Operating costs	£million
Redundancy	30.7
Short Term Interest*	-23.9
Ripple effect (see paragraph 29)	<u>6.4</u>
TOTAL	13.2

Capital employed	£million
Net short term investments	321.3
Deferred redundancy debtor	24.5
Change in notional debtor (paragraph 29)	26.6
Ripple effect (see paragraph 29)	<u>0.4</u>
TOTAL	372.8
Capital costs £372.8 @ 12.5%	46.3
Total excluded from inland conveyance:	59.8

(* This is the short-term interest actually earned which BT has treated as a negative operating cost. It is excluded because the associated short-term investments have been excluded from capital employed.)

31 The costs excluded from the calculation of charges for International Direct Dial (IDD) calls are as follows:

Operating costs	£million
Redundancy	2.1
Short Term Interest	-1.2
Ripple effect	<u>-0.1</u>
TOTAL	0.8

Capital employed	£million
Deferred redundancy debtor	1.5
Ripple effect	0.2
Net short term investments	<u>1.5</u>
TOTAL	374.9
Capital costs £3.2 @ 12.5%	0.4
Total costs excluded from IDD charges:	60.1

The exclusions are on the same basis as for inland conveyance as explained above (paragraphs 24–29).

Relevant Costs – Non-Conveyance Standard Services

32 For other Standard Services, the charges are also based on the fully allocated costs to BT of providing the service, taking into account a contribution to relevant overheads and a reasonable return on relevant capital employed. The exclusions from overheads and capital employed discussed in paragraphs 24–29 above have also been made to the non-conveyance Standard Services (some of which are detailed at Annex One) for the same reasons.

Statement of Costs of Standard Services

33 The Statement of Costs of Standard Services of BT Network (previously known as the Components and Parts Matrix) is published in BT's Financial Statements. An extract from the Financial Statements for the Businesses and Activities 1995/96 which has been adjusted by OFTEL in accordance with this determination with 12.5% return on capital employed (see paragraph 46) is given at Annex Three. This shows:

- (a) The component costs that BT Network 'charges' to BT Retail and Operators; and
- (b) The routing factors which, multiplied by the component costs, produce the Standard Service charge.

Structure of charges

34 This determination uses Element Based Charges (EBCs). EBCs are calculated by adding the product of component costs and routing factors (see paragraph 37) and costs which do not vary with usage of the network (eg product management costs) spread over relevant interconnect and BT call minutes.

35 Tables 1 and 2 at Annex Two show EBCs for 1994/95 and the forecast EBCs for 1996/97. A single tandem EBC is made up of both the single tandem and the local exchange segments and a double plus tandem EBC includes the double tandem, single tandem and local segments.

Time of Day Gradients

36 In accordance with Condition 13.5A.2(c), call conveyance charges vary according to the time of day gradient reflecting BT's retail tariff. Addendum 7 to the determination sets out deaveraged EBCs by time of day. The calculation is explained in Tables 1 and 2 of Annex Two.

Routing Factors

37 The methodology for deriving the costs of interconnecting call segments makes use of 'routing factors' produced from a sample of the use per call minute of each component of the inland portion of all calls at a period of time. Routing factors are measures of the frequency with which particular components are used by each service. Routing factors represent the weighted average use of local switches (DLE/ALE/TXE), main switches (DMSU/DJSUs), the average distance of junction and trunk transmission between switches and between local exchange and remote concentrator units and the average number of links used in transmission (see Annex Two).

38 A new system for producing routing factors was developed in 1993/94 and used for the first time to produce the routing factors for the 1995/96 Interim Charges. They are based on an analysis of a two week sample of 1 in 300 calls made in September/October each year. The routing factors given in this determination are based on the sample taken in 1994/95. The routing factors that will be used in the 1995/96 Final Charges determination will be based on a sample taken in 1995/96. (The new system allows more samples to be taken more frequently and allows for interrogation of subsets as and when required.)

39 OFTEL has received representations from the industry in relation to the use of DLE switches as a tandem switch in the single tandem segment. In 1995/96, 12.5% of single tandem calls were DLE-DLE-DLE calls. Currently, the DLE when used as a tandem switch is charged for in the same way as any other use of a DLE. Since a DLE costs more per minute than a DMSU, this inflates the cost of a single tandem segment. With total cost recovery overall, if DLE as a tandem were to carry a lower charge, the price of a normal use of a DLE, eg in the local exchange segment would increase. Overall, the same amount of cost would be recovered, but the current methodology does not in OFTEL's view appropriately reflect the pattern of costs and particular operators may be paying more or less than they should. OFTEL has proposed alternative options as follows:

- To set the charge at the same level as the normal charge for the DLE less the concentrator costs,
- To remove from the DLE charge the concentrator costs and an element to reflect the smaller processing requirement and different switching requirements for the DLE switch when it is performing a tandem function; or
- Since the DLE is serving as a tandem, set the charge to be the same as the charge for a tandem switch.

It is planned to resolve the issue for the determination of the 1995/96 Final Charges planned for January 1997.

Remote Concentrator Units

40 A reduction of 0.7% has been made to component costs as an estimate of the impact of costs related to BT's use of 2 concentrators in local calls where only one DLE is involved. Various Operators have suggested that the costs of RCUs should be separated from the cost of a local switch enabling a more precise calculation of any additional costs payable by BT and lower costs payable by Operators. In the context of consultation on Network Charge Controls, OFTEL will propose that a new set of network components will be introduced in 1997/98 including the splitting of local exchange costs between the local switch and concentrator.

De-averaging

41 The conveyance charges have been averaged across the country. However, for double plus tandem calls an element of distance de-averaging has been introduced so that interconnection charges paid by Operators to BT can be more closely related to their use of BT's network. This applies to all double plus tandem calls including, for example, double plus tandem ISDN.

42 De-averaging of the charges for double plus tandem calls by distance is designed to encourage efficient investment by Operators in network infrastructure. The underlying principle is that Operators should pay less to BT if they use less of BT's network and that thus they will gain greater rewards from their investment in building their own infrastructure. It is also in line with the Director General's policy of introducing greater transparency in relation to underlying costs and it should help Operators to make more economically efficient choices of where to connect to BT.

43 The relevant route for charging for double plus tandem calls is the route with the shortest distance (measured in terms of the sum of straight-line distance between switches on the route) between the point of connection for the terminating end of the call. The double plus tandem charge bands are divided into three charging bands: 0—<100 km, 100—<200 km, 200+ km and these relate to the distance between the tandem switches on the route. These distances exclude the single tandem to DLE link although this is included when establishing which route should be chosen as the relevant route for determining the charge.

Capital employed

44 Capital employed is based on the net assets method, adjusted for the current portion of long term debt, dividends payable and other items the Director General has determined, taking the mean of the opening and closing balances for the year.

45 Interconnect debtors have been included in the figure for capital employed. OFTEL has examined the appropriate number of days outstanding and the Director General is satisfied that, on the basis of current information, 59 days is appropriate. It is made up of 15 days as the average number of days the debt is outstanding for the month in question, 14 days as the period required for issuing the invoice and 30 days for payment by the Operator. It reflects BT's interconnect debtors position in its Financial Statements.

Rate of Return on Capital Employed

46 The Director General used the figure of 15% as the rate of return on capital employed in the 1995/96 Interim Charges Determination. This was first used for the Systems Business in the BT/MCL determination of December 1993. OFTEL reviewed BT's cost of capital in 1995/96 in the context of the Price Control Review and set out the financial modelling in Annex E to the December 1995 Price Control Review Consultative Document. Further consideration on the cost of capital was set out in the Second Price Control review Consultative Document issued in March 1996. OFTEL considered a large amount of evidence on the parameters underlying the calculation of BT's cost of capital. It concluded that, taking account of the most recent evidence, it was appropriate to apply a value of around 5 for the equity risk premium, rather than the value of around 8 which had been used previously. The effect of this is to reduce the pre-tax nominal cost of capital from 15% to 12.5%. The Director General has formally notified BT that the rate of 12.5% is reasonable for the Systems Business and that rate has been used to calculate the charges in this determination.

International Direct Dial Calls

47 The charges for IDD calls also have to be calculated in accordance with Condition 13.5A of the BT Licence, that is based on BT's fully allocated costs of conveyance, relevant overheads and a rate of return on

capital employed. The costs of conveyance include the payments made to overseas operators in respect of delivery of calls overseas.

48 In December 1995, the Director General issued a consultation paper, *International Direct Dialed Calls*, seeking views on the basis of determining the charges for IDD calls for this financial year. In June, the Department of Trade and Industry announced the liberalisation of international telecommunications facilities. The Director General has concluded, in the light of the responses to his consultation paper and the DTI's announcement, that the appropriate basis for calculating IDD charges should continue to be 'gross' accounting; that is, IDD charges should cover, in full, the outpayments made by BT to overseas operators for terminating calls.

Other issues

Competition in Directory Services

49 In October 1995, OFTEL issued a Consultative Document – *Uses of Directory Information* – on issues relating to the future structure of the provision of directory information services. Since then, OFTEL has held workshops with industry and consumer representatives primarily in order to explore the structural, regulatory and commercial issues surrounding the liberalisation process. OFTEL intends to come to an initial view internally on its intended policy for introducing competition into the market for directory services and products. This will be followed by a statement aimed at interested parties before the end of 1996.

Data Management Amendments (DMA)

50 OFTEL has received representations about the way costs of DMA are recovered by BT. They were essentially that: charges are payable at the start of business and prior to the launch of new services and therefore seen as a barrier to entry; BT has not felt obliged to pay other operators for the cost of amending their switches to take account of new numbers which BT has introduced; BT has not been consistent in its charging for DMAs; and the level of individual charges seemed excessive.

51 Following discussion at the Interconnect Policy Forum (IPF), a consensus was reached that, with effect from 1 April 1995, DMAs should not be separately charged for but recovered through an uplift of both conveyance and transfer charges. BT proposes that DMA costs will be included in local exchange and main exchange component costs with the majority going to local exchange. This could only be effected through a modification to BT's licence. OFTEL has now separately proposed a licence modification to remove DMAs from the list of Initial Standard Services and to provide that the costs involved be recovered through conveyance services. The statutory consultation commenced on 8 November 1996 and is due to end on 6 December. It is hoped that BT's Board will consider the proposed modification at a meeting in mid-December 1996.

52 This interim determination includes charges for DMAs but should the licence modification be made, the Final Charges determination will not include charges for DMAs but the costs will be added to the charges for switched conveyance.

IPLCs

53 OFTEL has received a number of requests to determine the charges for IPLCs under Condition 13. OFTEL considers that the supply of IPLCs is in principle covered by Condition 13. OFTEL proposes to make the determinations on which it recently consulted shortly. Such services are not covered by this determination. OFTEL consulted on the future pricing arrangements last summer and will set out its proposals in the light of responses to the consultation in the Network Charge Control Consultative Document (due to be published at the end of November 1996).

Irish Cross Border Traffic

54 OFTEL has determined a separate IDD charge for traffic between Northern Ireland and Eire. In accordance with the accounting rates agreed with Telecom Eireann, this charge does not apply to traffic originating elsewhere in the United Kingdom.

Licence To Use BT's NIS Database

55 'Licence to use BT's NIS Database' is a service which appeared on the list of BT's Initial Standard Services. It relates to the download of the database of customers' phone numbers to allow another operator to provide its own DQ services and produce its own phone books. The charges for the service were not determined as part of the determination of Interim Charges for 1995/96 because of the difficulties in establishing a satisfactory means of calculating the costs involved. However, although BT offered a charge in its Carrier Service Price List, no operator has elected to take up the service to date.

56 In addition, OFTEL has been reviewing with the industry the possibility of competition in the provision of directory information, see paragraph 49 above. The proposed future arrangements may not require download of BT's NIS database in the way envisaged by the current arrangements.

57 In the light of these developments, OFTEL is proposing a licence modification which will have the effect of removing the service from the list of Initial Standard Services and remove the need to determine it. This would not impact on an operator's right in the future either to request the service under Condition 13 or to request a determination of the charge.

ANNEX ONE

NON-CONVEYANCE CHARGES: DETAIL OF CALCUALTIONS

The non-conveyance charges are based on BT's fully allocated costs in 1995/96 which include relevant overheads and a 12.5% return on capital employed. This Annex explains the main reasons for changes in costs from the 1995/96 Interim Charges determination to the 1996/97 Interim Charges determination.

1 Access to Inland operator assistance, inland transfer charge calls, directory enquiries, international directory enquiries, and emergency service

Operator costs are the largest single component in these services and together with redundancy costs have accounted for 60% to 70% of operating costs. In 1995/96, there was a sharp fall in redundancy costs from the peak in 1994/95 as the high level of redundancy costs in 1992/93 dropped off (redundancy costs are amortised over three years) and this had a greater impact on costs in services where there is a large payroll. Consequently, there has been a sharp reduction in costs for these services.

2 International operator assistance

The sharp fall in costs between 1993/94 and 1995/96 was mainly the result of a change in the way overheads are allocated between operator assistance and IDD. In the FRBS in 1993/94 they were allocated in proportion to the share of operator costs whereas in the Financial Statements they are allocated according to the share of total direct costs of which operator costs are a small proportion.

3 KDT terminals for DAS access

The charges are based on a nominal sum and represent the estimated value of the spare parts of the second-hand units which BT could use. The charge is unchanged from the Interim Charge for the year ending 31 March 1996.

4 Access to DAS per terminal

Costs per terminal have fallen, largely due to a rise in the number of terminals.

5 BT Phonebooks

The costs are based on the costs of production divided by the total number of phonebooks produced as numbers delivered. The argument put forward by BT that the costs should be per delivered book as OLOs benefit from economies of scale and can purchase books outside of the normal production schedule which would have otherwise incurred higher costs, is not accepted. If it were accepted, BT would over-recover its costs unless surplus books held instore were sold at retail cost only, as all the wholesale costs would be

recovered from delivered books. The charges take into account all volume discounts. Between 1994/95 and 1995/96, BT reorganised its phonebook compilation operations. The Personal Communications division has reduced the number of centres from 12 to 1 with a corresponding reduction in staff. Largely as a result of this, phonebook costs have fallen significantly.

6 NIS Entry

NIS entry costs fell sharply in 1995/96 as a result of lower unit input times and higher volumes, particularly for disc and EDI entry. In 1995/96 a new standardised system was introduced which enabled the Operator Liaison Group (OLG) to handle a greater quantity of input data. The replacement system also enabled electronically submitted data to be submitted to NIS automatically rather than being pre-processed by OLG staff. Rationalisation and standardisation of hardcopy format has also led to a reduction of input times. For electronic input, where the fall in costs is most significant, input time fell by 90% in 1995/96 while volumes rose fifteenfold.

7 Data Management Amendments

The charges at Addendum 5 are higher than the 1995/6 Interim Charges. This is mainly due to the change in accounting methodology for FRBS and Accounting Separation. Overheads in 1993/94 were derived from the conveyance cost model.

Accounting Separation has identified more accurately where costs should be allocated. For instance, an allocation of planning and development, finance and billing, customers service and depreciation costs was included in 1995/96 but not in 1993/94. (There was no depreciation as no capital employed was recorded). Also, in 1993/94 there was no identifiable capital employed so a profit margin of 5% was allowed. In 1995/96, capital employed has been identified and the cost of capital equates to an 8% profit margin.

8 In-Span Interconnection via PDH and SDH, Interconnection Extension Circuits (IEC) and Customer Sited Interconnect (CSI)

The 1996/97 Interim Charges for CSI lines and IEC circuits have been calculated using the unit costs of 2 Mbit/s private circuit transmission costs, connections and local ends and route factors reflecting the mix of junction and trunk links. The charges for other services for which there is a demand have been calculated by using the direct costs used in the OFTEL determined Interim Charges for 1995/96 and the volumes for these services in 1995/96. The total costs as recorded by BT are then compared to the sum of these direct costs to provide a mark-up that accounts for the overheads and return on capital employed. The charges for services for which there was no demand have been estimated by reference to the nearest similar service.

The charges in the previous determination of Interim Charges were derived from a bottom-up approach with a proportion of overheads and capital employed unidentified. The full allocation of costs under Accounting Separation has resulted in a rise in most costs.

The per kilometre rental charge determined for the Customer Sited Interconnect Link, the ISI transmission link and Interconnect Extension Circuits have been calculated on a route basis. The charge per radial kilometre is 1.8 times the route per kilometre charge.

ANNEX TWO

ROUTING FACTORS AND EBCs

A2.1 Table 1 of this Annex shows the average component costs for 1994/95 in pence per minute. There are four main components: local exchanges; trunk exchanges; junction transmission; and trunk transmission. The transmission components are further divided between costs which are sensitive to the number of transmission links and those which are sensitive to the length of the links.

A2.2 Table 1 also shows the 1994/95 routing factors for conveyance services. References to lengths of transmission paths are references to the average length of such paths for each segment. That is, the "length" routing factor is the product of the average length when such a segment is used and the frequency with which it is used. The segment conveyance rates can be calculated by totalling the products of the component costs and routing factors. These are then added to other costs to give total segment costs. Other costs separately identified include operator services (EQ and 999) and product management policy, planning and performance. All costs include their allocations of debt.

A2.3 Table 2 shows the forecast components costs for 1996/97 derived from Table 1 figures and 1995/96 routing factors.

A2.4 Both tables show EBCs by tariff gradient.

Table 1

	Local exchange	Main exchange	Junction link	Junction length	Trunk link	Trunk length	PPP & PM	EQ/999	Total ex EQ/999	Total plus EQ/999
Unit cost p/min	0.3944	0.1237	0.0964	0.0097	0.0844	0.0018	0.0965	0.0797		
Usage factors									EBCs	EBCs
Basic										
Local exchange	1.0160		0.5803	9.3938			1	1	0.644	0.724
Single tandem	1.2267	0.7893	1.0631	13.8429	0.2046	11.1109	1	1	0.952	1.031
Double tandem short	1.2931	1.7228	1.1622	15.4210	1.0761	59.0434	1	1	1.279	1.358
Double tandem medium	1.2931	1.7228	1.1622	15.4210	1.0761	139.2214	1	1	1.424	1.504
Double tandem long	1.2931	1.7228	1.1622	15.4210	1.0761	282.1474	1	1	1.684	1.763
Transit										
Single transit	0.0224	0.9777					1	0.2263		
Double tandem short	0.0846	1.9155	0.5601	9.1814	0.4311	23.7105	1	0.589		
Double tandem medium	0.0846	1.9155	0.5601	9.1814	0.4311	63.3717	1	0.661		
Double tandem long	0.0846	1.9155	0.5601	9.1814	0.4311	134.0721	1	0.7894		
Deaveraged EBCs										
		Ex EQ/999				Plus EQ/999				
	Daytime	Evening	Weekend		Daytime	Evening	Weekend			
Tariff gradient	1.256	0.781	0.590		1.256	0.781	0.590			
Basic										
Local exchange	0.809	0.503	0.380		0.909	0.565	0.427			
Single tandem	1.195	0.743	0.561		1.295	0.805	0.608			
Double tandem short	1.606	0.999	0.754		1.706	1.061	0.801			
Double tandem medium	1.789	1.112	0.840		1.889	1.175	0.887			
Double tandem long	2.115	1.315	0.993		2.215	1.377	1.040			
Transit										
Single transit	0.284	0.177	0.134							
Double tandem short	0.740	0.460	0.347							
Double tandem medium	0.830	0.516	0.390							
Double tandem long	0.991	0.617	0.466							

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ANNEX 3

BT NETWORK ACCOUNT

Statement of Costs and Standard Services 1995/96

- 1** Table 1 shows an extract from BT's Network Account: Statement of Costs and Standard Services 1995/96 that has been adjusted by OFTEL to take account of the reduction in capital employed due to the exclusion of part of deferred redundancy debtors and with ROCE of 12.5%.
- 2** Table 2 shows total charges for access to operator's international assistance identifying outpayments.

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Table 2

ACCESS TO OPERATOR'S INTERNATIONAL ASSISTANCE*

Band	Outpayments Pence per minute	Total charge Pence per minute
1	17.94	40.05
2	17.77	41.35
3	25.10	47.63
4	12.99	35.77
5	65.49	82.39
6	23.45	46.94
7	36.52	56.72
8	58.81	80.32
9	67.15	84.32
10	73.06	90.51
11	54.13	75.75
12	82.73	97.75
13	81.89	99.72
Eire	8.83	30.09

*In addition to the above there is an inland conveyance charge of 0.454 pence per minute.

INCOMING INTERNATIONAL TRANSFER CHARGE*

Band	Charge £ per call	Outpayment Pence per minute	Total charge Pence per minute
1	3.28	17.92	18.46
2	2.78	20.07	20.78
3	1.62	41.23	40.79
4	1.27	62.56	59.87
Eire	0.65	8.93	8.80

*In addition to the above there is an inland conveyance charge of 0.335 pence per minute.

ANNEX 4

NUMBER TRANSLATION SERVICES ("NTS") FREEFONE, LO-CALL, NATIONAL CALL AND PREMIUM RATE SERVICES.

- 1** The method of calculating the charges determined at Addendum 6 is designed to meet the Director General's objectives to promote investment and innovation in services with a telecommunication service component by adequately rewarding those who invest in these services whilst ensuring a fair return for owners of the infrastructure on which the call originates ("ONO").
- 2** The Director General considers that the determination at Addendum 6 should in principle apply generally, for example, where BT is the ONO and the call is terminated on the network of another Operator ("the TO"). The Director General's overall objective is to ensure that the ONO retains a sum sufficient to cover its costs of conveying the call to the BT network. For Freefone, Lo-call, National Call and Premium Rate Services, the Director General has determined that the ONO will pay to BT the Deemed Retail Price for the NTS on the basis that BT covers the ONO's costs of conveyance of the call over the network of the ONO, by paying the ONO the charge which has been determined for conveyance over a single tandem segment of the BT network plus an uplift to allow for the ONO's retail costs in covering these calls.
- 3** This uplift is intended to cover billing, customer services, marketing, worldwide sales, customer reception centres and any other retail overheads incurred. The figure of 45.3% is based on BT's 1995/96 Financial Statements. BT's figures have been adopted as OFTEL considers it is not practicable to establish such retail costs across the ONOs.
- 4** BT's single tandem segment charge is the basis for calculating the average cost of conveyance for an Operator when it accesses BT's NTS. BT contend that the number of switching stages within its network required to access the services of an Operator is likely to be greater than the number of switching stages required for an Operator to access BT's services. The Director General has considered BT's representations and is of the view that they may have some weight, but believes that it would not be practicable for OFTEL to analyse the relevant conveyance costs of each different Operator for this purpose.
- 5** The Director General has asked BT to provide a set of routing factors directly associated with NTS calls which would enable OFTEL to calculate what BT has suggested would be a more appropriate, standard cost of conveyance for BT but they have not been provided. BT's single tandem conveyance charge has therefore been used as the most practical charge.
- 6** Although OFTEL would prefer that 0800 calls should be completely free to caller, the Director General's determination does not prevent ONOs from imposing a charge for 0800 calls on their customers. Furthermore, it should be noted that this determination does not cover calls made which use an 0800 number to access an Operator's telephony services.

- 7 The effect of the determination at Addendum 6 to the determination can be expressed by the formulae:-

ONO keeps $P - D + C$

BT keeps $D - C$

where

P is the actual retail price charged by the ONO to the customer;

- C is the pence per minute charge for conveyance over a single tandem segment of BT's network determined in this determination (multiplied by the number of minutes of the call) plus an uplift of 45.3% to allow for retail costs incurred by the ONO in handling these calls;

D is the Deemed Retail Price for the call as defined in Addendum 6 to the Schedule to this determination.

Freefone, Lo-call and National Call services

- 8 For these calls D is **specific to the ONO**, provided that it is less than, or equal to the maximum level of D based on BT's retail prices. When the ONO's retail price is greater than BT's retail price, D will be BT's retail price. In the case of BT, D is based on BT's retail tariffs and reduced by 7.5% to allow for average discounts in retail tariffs charged by BT for these calls. When D is based on an ONO's retail price, it should be adjusted to take account of that ONO's average discounts.
- 9 D for 0800 calls is 0.00 because these calls are generally free to caller. The values of D for 0345 and 0990 shown in the tables which follow have been calculated from BT's published price list and the average price per minute of local and national calls respectively taking account of the minimum charge. The use of a minimum charge means that very short duration calls are charged at a higher than average per minute rate.
- 10 The underlying principle is that when the ONO sets the charge for P equal to the Deemed Retail Price, it recovers its costs which are represented by the amount for C . The reason for determining that for Freefone, Lo-call and National Call D is specific to the ONO is that, for calls such as 0345 calls, customers expect to pay the local tariff of their Operator, rather than BT's local call charge. Failure to reflect this in the definition of D would mean that those Operators whose local call charges are lower than BT's would not recover their costs if they charged their own local call charge for 0345 calls.
- 11 It would not be appropriate to make D specific to the ONO where D is greater than BT's D without making C also specific to the ONO. Otherwise, some ONOs would make a loss on the calls. The reason why D for an Operator would exceed BT's D would generally be that Operators' costs are higher than those of BT. For example, in the case of a Mobile Operator, the local call charge is much greater than BT's local call charge and this reflects the higher costs of the Mobile Operator. If D for an 0345 call were set equal to the Mobile Operator's charge for a local call, and the Operator set P equal to this, it would receive an amount equal to a single tandem charge, while both its costs and its charges to customers would exceed this.

Mobile Operators

- 12 It is not practicable to include a provision that C should also be Operator specific (and so could be sufficient to cover a Mobile Operator's costs). For this reason, in the determination of Interim Charges for BT's Initial Standard Services for the year ending 31 March 1996, OFTEL proposed that BT should make an allowance for such higher costs in its contracts with its Service Provider customers.
- 13 OFTEL still believes that this would, in principle be the ideal solution since Service Providers would be given the choice of whether or not to receive free to caller calls from Mobile Operators and would pay accordingly. However, OFTEL has investigated this issue further and the Director General is persuaded that this proposal would involve complex and expensive systems developments. Moreover, if a call were to arrive at the Service Provider having transited another fixed line Operator, on the way, the TO would have no indication that the call originated on a mobile network and thus the system would be ineffective.
- 14 The options for Mobile Operators are, therefore, to charge the originating customer more, to bar such calls or to absorb the costs. Barring calls is expensive, produces no income and creates customer confusion. However, if Mobile Operators intend to recover those higher transmission costs which are not covered by the determined charging methodology by charging the originating customer, they should use a recorded warning message.

Premium Rate Services

- 15 For these calls D is based on BT's retail tariffs reduced by 3.5% to allow for average discounts charged by BT for these calls and a further 4.4% to allow for bad debts.
- 16 The prices for PRS calls have not been adjusted for the minimum charge due to the absence of data on call durations and the fact that the high price of these calls suggests that any adjustment would be insignificant
- 17 OFTEL has determined a fixed charge for 0894-1 to 0894-3 and 0894-5 to 0894-9. The call charge is based on an average call duration of 16.4 seconds.
- 18 Table 1 below illustrates the net payments to be made to or by BT for Freefone, Lo-call, National Call and Premium Rate Services when BT is the Terminating Operator ("TO") and BT's retail price is used. A negative symbol indicates a payment by BT to the ONO and a positive symbol indicates a payment by the ONO to BT. The calculations are based on the formulae:

ONO keeps $P - D + C$

BT keeps $D - C$

Table 1

P	BT's Retail price, exclusive of VAT, adjusted for minimum call duration			
	ppm	Weekend	Evening	Daytime
	0800	0.00	0.00	0.00
	0345	1.41	1.66	3.72
	0990	2.87	4.97	8.44
	0891	33.19	33.19	41.70
	0897	127.65	127.65	127.65
	0898	33.19	33.19	41.70
	per call			
	0894	29.70	29.70	29.70

D	Deemed retail price after discounts and bad debt			
	ppm	Weekend	Evening	Daytime
	0800	0.00	0.00	0.00
	0345	1.30	1.54	3.44
	0990	2.66	4.59	7.80
	0891	30.62	30.62	38.47
	0897	117.76	117.76	117.76
	0898	30.62	30.62	38.47
	per call			
	0894	27.40	27.40	27.40

C	Cost of conveyance plus retail costs			
	ppm	Weekend	Evening	Daytime
	0800	0.57	0.74	1.25
	0345	0.57	0.74	1.25
	0990	0.57	0.74	1.25
	0891	0.57	0.74	1.25
	0897	0.57	0.74	1.25
	0898	0.57	0.74	1.25
	per call			
	0894	0.16	0.20	0.34

TO Retains D - C

	ppm	Weekend	Evening	Daytime
	0800	-0.57	-0.74	-1.25
	0345	0.73	0.80	2.19
	0990	2.09	3.86	6.56
	0891	30.05	29.88	37.22
	0897	117.19	117.03	116.51
	0898	30.05	29.88	37.22
	per call			
	0894	27.24	27.20	27.06

NB The above tables are illustrative, the retail rates shown are those which were in effect until the end of September 1996. Some changed in October 1996 and different prices will apply accordingly.

General Notes

1. Definitions

- 1.1 In this Carrier Price List a reference to a Schedule, unless stated otherwise is to a Schedule in Annex C of the relevant agreement. Unless the context requires otherwise, words and expressions have the meaning given in the relevant agreement.
- 1.2 In this Carrier Price List charges for Calls are quoted in pence per minute unless stated otherwise.
- 1.3 In this Carrier Price List Daytime, Evening and Weekend periods are as defined in the relevant agreement.
- 1.4 In this Carrier Price List Call Segments are as defined in the relevant agreement.
- 1.5 In this Carrier Price List Number Ranges are shown for non-geographic services only.
- 1.6 For the purposes of some agreements this Carrier Price List is also known as the BT Carrier Price List.

2. Scope

- 2.1 The charges in this Carrier Price List only apply where an interconnection agreement makes an express reference to the Carrier Price List or the BT Carrier Price List.
- 2.2 All references to an entry in this Carrier Price List shall be construed as a reference to that part of this Carrier Price List relating to the relevant Financial Year In Question.
- 2.3 All the pages headed Carrier Price List 1 April 1996 to 31 March 1997 shall form part of this Carrier Price List and shall relate to the Financial Year In Question 1 April 1996 to 31 March 1997.

3. Value Added Tax

- 3.1 All charges in this Carrier Price List are exclusive of VAT unless there is an express reference stating that a charge includes VAT.

General Notes

4.0 Variations

- 4.1 If there is a difference between a charge set out in this Carrier Price List and a charge determined by the Director General then the charge determined by the Director General shall prevail.
- 4.2 If there is a difference between a charge set out in this Carrier Price List and a charge contractually agreed by the Parties then the charge contractually agreed by the Parties shall prevail.
- 4.3 Charges may be subject to review.

5.0 Distance Related Charge Bands

- 5.1 The relevant route for charging for BT Double Plus Tandem Calls will be the route with the shortest distance (measures in terms of the sum of the straight-line distance between switches on the route) between the point of connection and the principal switch (typically a DLE) for the terminating end of the call.
- 5.2 To determine the appropriate BT Double Plus Tandem charge band (0 - <100km, 100 - <200km, and 200+km) the distance (measured in terms of the sum of straight line distances between the tandem switches excluding the single tandem to DLE link) on the relevant route shall be used.

6 Key to Short Names

- 6.1 In this Carrier Price List, unless stated otherwise:

ACC means	ACC Long Distance UK Ltd
AirCall means	AirCall Communications Ltd
Atlantic means	Atlantic Telecommunications Ltd
AT&T means	AT&T Communications (UK) Ltd
Bell Cablemedia means:	Bell Cablemedia (Aylesbury and Chiltern) Ltd Bell Cablemedia (Kent) Ltd Bell Cablemedia (South Hertfordshire) Ltd Bell Cablemedia (Wearside) Ltd
Bell Cablemedia Benchmark means:	Bell Cablemedia (Leeds) Ltd Bell Cablemedia (London East) Ltd Bell Cablemedia (Norwich) Ltd Bell Cablemedia (Peterborough) Ltd Bell Cablemedia (South East) Ltd Bell Cablemedia (York) Ltd

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Birmingham means	Birmingham Cable Ltd
BT Mobile means	BT Mobile Communications
Cable London means:	Cable Camden Ltd Cable Enfield Ltd Cable Hackney & Islington Ltd Cable Haringey Ltd
CableTel means	CableTel Northern Ireland
CableTel Benchmark means:	CableTel Bedfordshire Ltd CableTel Cardiff Ltd CableTel Central Hertfordshire Ltd CableTel Glasgow CableTel Hertfordshire Ltd CableTel Kirklees CableTel Newport CableTel North Bedfordshire Ltd CableTel Surrey Ltd CableTel West Glamorgan Ltd
Cambridge means:	Anglia Cable Communications Ltd Cambridge Cable Ltd East Coast Cable Ltd
Cellnet means	Telecom Securicor Cellular Radio Ltd
COLT means	COLT Telecommunications
Comcast means	Comcast Teesside Ltd
Concert means	Concert Communications Company
Diamond means:	Diamond Cable (GrimClee) Ltd Diamond Cable (Leicester) Ltd Diamond Cable (Lincoln) Ltd Diamond Cable (Mansfield) Ltd Diamond Cable (Nottingham) Ltd
Energis means	Energis Communications Ltd
Esprit means	Esprit Telecom of the United Kingdom Ltd
Eurobell means:	Eurobell (South West) Ltd Eurobell (Sussex) Ltd
Frontel means	Frontel Communications Ltd
General Cable means:	Barnsley Cable Communications Ltd Bradford Cable Communications Ltd Doncaster Cable Communications Ltd Halifax Cable Communications Ltd Middlesex Cable Ltd

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	Sheffield Cable Communications Ltd
	Wakefield Cable Communications Ltd
	Windsor Television Limited
Global Numbers means	Global Numbers Ltd
Global One means	Global One Communications Holding Ltd
Golden Pages means	Golden Pages (Jersey) Ltd
Guernsey means	States of Guernsey Telecommunications Board
Hutchison means	Hutchison Paging (UK) Ltd
Imminus means	Imminus Ltd
Ionica means	Ionica PLC
IVS means:	
	Andover Cablevision Ltd
	Oxford Cable Ltd
	Stafford Communications Ltd
	Wessex Cable Ltd
iXnet means	International Exchange Network Holdings Ltd
Jersey means	States of Jersey Telecommunications Board
Kingston means	Kingston Communications (Hull) Ltd
Manx means	Manx Telecom Ltd
MCL means	Mercury Communications Ltd
MFS means	MFS Communications Ltd
MPCL means	Mercury Personal Communications Ltd
Norweb means	Norweb PLC
Nynex means:	
	Nynex CableComms Bolton
	Nynex CableComms Bromley
	Nynex CableComms Bury and Rochdale
	Nynex CableComms Cheshire
	Nynex CableComms Derby
	Nynex CableComms East Lancashire
	Nynex CableComms Greater Manchester
	Nynex CableComms Macclesfield
	Nynex CableComms Oldham and Tameside
	Nynex CableComms Solent
	Nynex CableComms Staffordshire
	Nynex CableComms Stockport
	Nynex CableComms Surrey
	Nynex CableComms Sussex
	Nynex CableComms Wessex
	Nynex CableComms Wirral Ltd
Orange means	Orange Personal Communications Ltd
PageOne means	PageOne Communications Ltd
Redstone means	Redstone Network Services Ltd
RNSL means	Racal Network Services Ltd
RSL means	RSL Com Europe Ltd

General Notes

Scottish Telecom means	ScottishPower Telecommunications Ltd
Spacotel means	Spacotel UK Ltd
TeleCential means:	Cable Television Ltd Cable Thames Valley Ltd Heartland Cablevision UK Ltd Herts Cable Ltd
Telewest means:	Telewest Communications (Central Lancashire) Ltd Telewest Communications (Cotswolds) Ltd Telewest Communications (Cumbernauld) Ltd Telewest Communications (Dumbarton) Ltd Telewest Communications (Dundee and Perth) Ltd Telewest Communications (Falkirk) Ltd Telewest Communications (Glenrothes) Ltd Telewest Communications (Liverpool) Ltd Telewest Communications (London South) Ltd Telewest Communications (Midlands) Ltd Telewest Communications (Motherwell) Ltd Telewest Communications (North East) Ltd Telewest Communications (Scotland) Ltd Telewest Communications (South East) Ltd Telewest Communications (South Thames Estuary) Ltd Telewest Communications (St.Helens and Knowsley) Ltd Telewest Communications (Telford) Ltd Telewest Communications (Wigan) Ltd
Telia means	Telia International UK Ltd
Telstra means	Telstra (UK) Ltd
Torch means	Torch Communications Ltd
Videotron means	Videotron City and Westminster Ltd
Videotron Benchmark means:	Videotron Ealing Ltd Videotron Greenwich Ltd Videotron Hampshire Ltd Videotron Harrow Ltd Videotron Southampton and Eastleigh Ltd Videotron South London Ltd Videotron Thamesmead Ltd Videotron West London Ltd
Vodafone means	Vodafone Ltd
WorldCom means	WorldCom International Inc.
WorldXchange means	WorldXchange Communications Ltd